Reference for the Centillion 100 8/2-port EtherSpeed 10BASE-T/100BASE-FX Switch Module

Part No. 893-00994-A
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Bay Networks

Introduction

The Centillion 100 EtherSpeed 10BASE-T/100BASE-FX Switch Module from Bay Networks® inserts into one slot of a Centillion 100™ chassis. The module provides eight 10BASE-T switched ports that operate at 10 megabits per second (Mb/s) and two 100BASE-FX switched ports that operate at 100 Mb/s.

This guide contains information specific to the 8/2-port EtherSpeed 10BASE-T/100BASE-FX Switch Module and includes the following topics:

- Status LED descriptions
- Default configuration
- 100BASE-FX cable requirements
- 10BASE-T port pin assignments
- Technical specifications
- Declaration of Conformity

For information about installing and troubleshooting Centillion 100 EtherSpeed™ modules, refer to *Using the Centillion 100 EtherSpeed Switch Modules* (Bay Networks part number 893-890-B). Refer to *Using SpeedView 2.1 for Windows* (Bay Networks part number 893-891-B) for information about how to use SpeedView™ to configure features on an EtherSpeed module and a Centillion 100 switch.

Figure 1 illustrates the 8/2-port EtherSpeed 10BASE-T/100BASE-FX Switch Module.

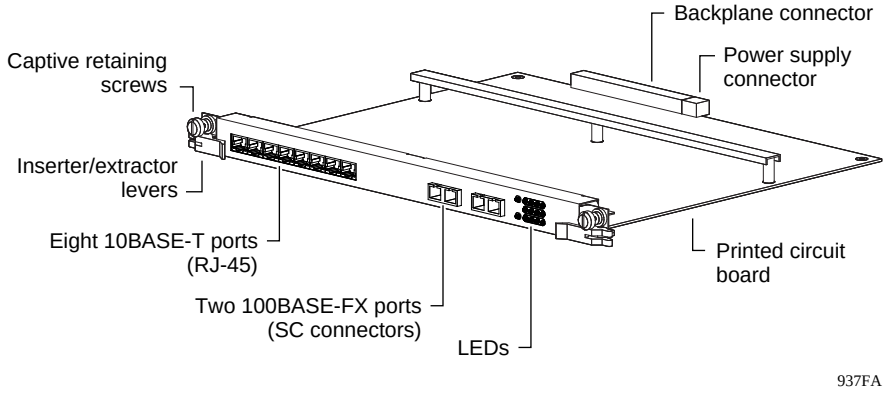


Figure 1. EtherSpeed 10BASE-T/100BASE-FX Switch Module

Status LEDs

Two banks of status LEDs on the EtherSpeed module correspond to the port numbers on the module (see Figure 2). Each fiber port has a correspondingly numbered LED.

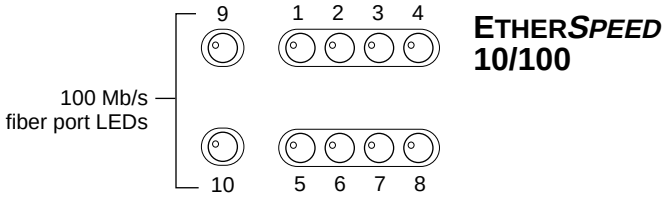


Figure 2. EtherSpeed 10BASE-T/100BASE-FX Switch Module LEDs

Each numbered LED turns on, turns off, or blinks to indicate link status and/or data activity as described in Table 1.

Table 1. EtherSpeed LED definitions

LED State	Meaning
Turns on	Port is enabled from network management, and a cable is attached.
Blinks	Data is being transmitted or received.
On (steady, not blinking)	Port detects link pulses from the other end, but there is no data.

Default Configuration

Table 2 lists the factory defaults for ports on the EtherSpeed module.

Table 2. Factory defaults for EtherSpeed 10/100 Mb/s ports

Parameter	Factory default	Configurable options
Switching mode	Transparent	Transparent
Spanning Tree Protocol	None	None, IEEE
Path cost	16	1–65535
Port partition state	Enabled	Enabled, Disabled
Filters	Disabled	Enabled, Disabled
PMD type	• 10BASE-TX • 100BASE-FX	None
Port speed		
• 10BASE-TX	10 Mb/s	None
• 100BASE-FX	100 Mb/s (autosensing)	None
Half/full duplex	Full Duplex	Half/full duplex
Bridge group	2	2–32
Priority	128	0-255

Fiber Port Requirements

Two SC fiber optic connectors (see Figure 3) on the EtherSpeed module provide 100BASE-FX 100 Mb/s ports. The 100BASE-FX ports have the following options and requirements:

- Cable Options
  - — 62.5-micron multimode fiber optic
  - — 50/125-micron multimode fiber optic
- Maximum fiber cable length
  - — 380 meters (1246.4 feet) when operating in half-duplex mode
  - — 128 meters (419.84 feet) if one of the FX ports is connected to a repeater that has FX ports and TX ports

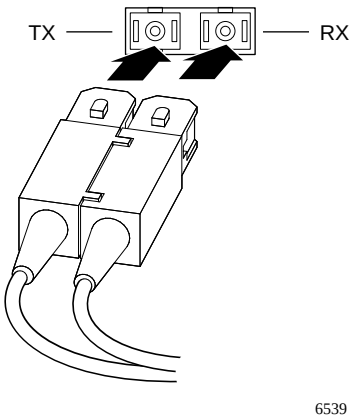


Figure 3. SC connector

UTP Port Requirements

The RJ-45 connectors for the 10BASE-T ports accept standard unshielded twisted pair (UTP) cable and are wired as MDI-X ports to connect end stations without using crossover cables. Use 100-ohm Category 5 UTP cable with RJ-45 plugs on each end of the UTP cable.

Table 3 shows the pin assignments for 10BASE-T UTP ports in the standard MDI-X configuration.

Table 3. 10BASE-T MDI-X port pin assignments

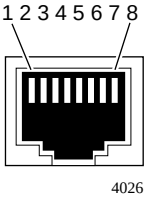
RJ-45 connector port (8-pin modular)	Pin #	MDI-X ports
	1	Receive data +
	2	Receive data –
	3	Transmit data+
	4	Not used
	5	Not used
	6	Transmit data –
	7	Not used
	8	Not used

Figure 4 shows the pin assignments for a 10BASE-T Ethernet UTP crossover cable used to connect an Ethernet hub directly to the EtherSpeed module.

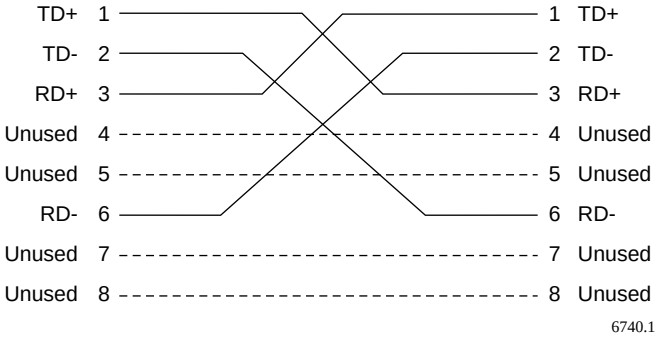


Figure 4. 10BASE-T Ethernet UTP crossover cable pin assignments

Technical Specifications

Network Protocol and Standards Compatibility

IEEE 802.3 for 10 Mb/s ports

IEEE 802.3u for 100 Mb/s ports

Data Rate

100 Mb/s

Interfaces

SC fiber optic connectors for 100BASE-FX Ethernet

RJ-45 (8-pin modular) connectors for 10BASE-T Ethernet

Microprocessors

Baseboard:	64-bit MIPS 4700 series processor, 133 MHz

Memory

Processor:	2 MB
Buffer pool:	4 MB

Electrical Specifications

Power consumption:	35 W (119.35 BTUs)

Physical Specifications

Dimensions:	(L) 10.5 by (W) 12.5 by (H) 1.0 in. (L) 26.7 by (W) 31.7 by (H) 2.5 cm
Weight:	2.5 lbs (1.1 kg)

Environmental Specifications

Operating temperature:	0° to 40° C
Storage temperature:	–25° to 70° C
Operating humidity:	85% maximum relative humidity, noncondensing
Storage humidity:	95% maximum relative humidity, noncondensing
Operating altitude:	10,000 ft (3,000 m) maximum
Storage altitude:	10,000 ft (3,000 m) maximum
Free fall/drop:	ISO 4180-s, NSTA 1A
Vibration:	IEC 68-2-6/34
Shock/bump:	IEC 68-2-27-29

Electromagnetic Emissions

Meets requirements of:
FCC Part 15, Subpart B, Class A
EN 55 022 (CISPR 22:1985), Class A
VCCI Class 1 ITE

Electromagnetic Susceptibility

Electrostatic discharge (ESD):	EC 801-2, Level 2
Radiated electromagnetic field:	EC 801-3, Level 2
Electrical fast transient/burst:	EC 801-4, Level 2

Safety Agency Approvals

UL listed (UL 1950)
CSA certified (CSA 22.2 #950)
TUV licensed (EN 60 950)
UL-94-V1 flammability requirements for all PC boards

Declaration of Conformity

The following Declaration of Conformity for the Centillion 100 8/2-port EtherSpeed 10BASE-T/ 100BASE-FX Switch Module identifies the product, the Bay Networks name and address, and the applicable specifications that are recognized in the European community.

Declaration of Conformity to Type

Application of Council Directive(s): EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC

Manufacturer's Name: Bay Networks, Inc.

Manufacturer's Address: 4401 Great America Parkway
Santa Clara, CA 95052-8185 USA

declares, that the product,

Product Name: Centillion 8 Port EtherSpeed Enet Switching Host for 10BASE-T

S/N Range: all

Model Number: not applicable

Product Options: 1k CAM, 8k CAM

conforms to the following Standards:

Safety: EN60950

EMC: EN50081-1 EN55022 (CISPR 22, Class A)
EN50082-1 IEC 801-2:1984 IEC 801-3:1984 IEC 801-4:1988

The type as described in EC Type-Examination Certificate Number _____, and (or BABT Approval Number, as applicable)

The following Common Technical Regulations and/or normative documents: (or the relevant Standards where National Approvals apply)

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Place: Santa Clara, California, USA

Date: 25 April, 1997

John Lockwood
(Signature)

John Lockwood
(Full name)

EMC Group Manager
(Position)

Bay Networks

CE

QAF-132-C

Trademarks

Statement of Conditions